

CLAIMS

1. A dentifrice composition comprising a crystalline aluminosilicate having an average crystallite size below $0.2\ \mu\text{m}$.

2. A dentifrice composition as claimed in Claim 1 in which the aluminosilicate comprises a zeolite having the formula; $M_{2/n}O \cdot Al_2O_3 \cdot xSiO_2 \cdot yH_2O$.

3. A dentifrice composition as claimed in Claim 1 or 2 in which the zeolite is a P zeolite.

4. A dentifrice composition as claimed in Claim 2 or 3 in which x has a value up to 2.66.

5. A dentifrice composition as claimed in Claim 2 or 3 in which x has a value in the range 1.8 to 2.66.

6. A dentifrice composition as claimed in Claim 2 or 3 in which x has a value in the range 1.8 to 2.4.

7. A dentifrice composition as claimed in any one of the preceding claims in which the aluminosilicate has a moisture content below 20% by weight.

8. A dentifrice composition as claimed in any one of the preceding claims in which the average crystallite size of the crystalline aluminosilicate is between 0.01 and $0.2\ \mu\text{m}$.

9. A dentifrice composition as claimed in any one of the preceding claims in which the average crystallite size of the crystalline aluminosilicate is less than $0.1\ \mu\text{m}$.

10. A dentifrice composition as claimed in any one of the preceding claims in which the average crystallite size of the crystalline aluminosilicate is up to $0.08\ \mu\text{m}$.

11. A dentifrice composition as claimed in any one of the preceding claims in which the RDA of the crystalline aluminosilicate is not greater than 120.

12. A dentifrice composition as claimed in any one of the preceding claims in which the aluminosilicate has a PAV of up to 11, preferably up to 9.

13. A dentifrice composition as claimed in any one of the preceding claims in which the aluminosilicate has a calcium binding capacity of at least 130 mg CaO per gram of anhydrous aluminosilicate.

14. A dentifrice composition as claimed in any one of the preceding claims in which the aluminosilicate has an oil absorption of at least $40 \text{ cm}^3/100 \text{ g}$.

5 15. A dentifrice composition as claimed in any one of the preceding claims in which the aluminosilicate has a weight mean particle size of at least $0.5 \mu\text{m}$.

16. A dentifrice composition as claimed in any one of the preceding claims in which the aluminosilicate has a weight mean particle size of at most $10.0 \mu\text{m}$.

10 17. A dentifrice composition as claimed in any one of the preceding claims in which the aluminosilicate has a weight mean particle size in range 2.0 to $2.5 \mu\text{m}$.

15 18. A dental composition as claimed in any one of the preceding claims in which the crystalline aluminosilicate is derived from a zeolite P with the formula $M_{2n}\text{O} \cdot \text{Al}_2\text{O}_3 \cdot x\text{SiO}_2 \cdot y\text{H}_2\text{O}$ where M is an alkali metal and in which at least a proportion of the alkali metal M has been exchanged for one or more other metal moieties.

19. A dental composition as claimed in any one of the preceding claims containing at least one additional abrasive/cleaning agent.

20 20. A dentifrice composition as claimed in Claim 19 in which the additional agent comprises a different crystalline aluminosilicate, which acts as a cleaning booster.

25 21. A dentifrice composition as claimed in Claim 19 in which the cleaning booster has an RDA in the range 100 to 300.

22. A dentifrice composition as claimed in Claim 19 in which the cleaning booster has an RDA in the range 100 to 250.

30 23. A dentifrice composition as claimed in any one of Claims 19 to 22 in which the RDA of the first-mentioned aluminosilicate is less than 100.

35 24. A dentifrice composition as claimed in any one of Claims 19 to 23 in which the cleaning booster has a PAV of in the range 9 to 25.

25. A dentifrice composition as claimed in any one of Claims 19 to 24 in which the PAV of the first-mentioned aluminosilicate is less than 9.

40 26. A dentifrice composition as claimed in any one of Claims 19 to 25 in which the oil absorption of the cleaning booster is in the range 30 to $100 \text{ cm}^3/100 \text{ g}$.

27. A dentifrice composition as claimed in any one of Claims 19 to 26 in which the weight mean particle size of the cleaning booster is in the range 2.0 to 5.0 μm .

5 28. A dentifrice composition as claimed in any one of Claims 19 to 27 in which the cleaning booster has an average crystallite size above 0.2 μm .

29. A dentifrice composition as claimed in any one of Claims 19 to 27 in which the cleaning booster has an average crystallite size above 1.0 μm .

10 30. A dentifrice composition as claimed in any one of Claims 19 to 29 in which the proportions of the first-mentioned aluminosilicate and the cleaning booster present by weight are in the range 40:1 to 1 : 1

15 31. A dentifrice composition as claimed in any one of Claims 19 to 29 in which the proportions of the first-mentioned aluminosilicate and the cleaning booster present by weight are in the range 9:1 to 3:2.

20 32. A dentifrice composition as claimed in any one of Claims 19 to 29 in which the proportions of the first-mentioned aluminosilicate and the cleaning booster present by weight are in the range 4:1 to 7:3.

25 33. A dentifrice composition as claimed in any one of the preceding claims in which the amount of crystalline aluminosilicate present (not including any cleaning booster present) is in the range 10 to 50 per cent by weight of the dentifrice composition.

30 34. A dentifrice composition as claimed in any one of the preceding claims in which the amount of crystalline aluminosilicate present (not including any cleaning booster present) is in the range 25 to 50 per cent by weight of the dentifrice composition.

35 35. A dentifrice composition as claimed in any one of Claims 19 to 32 in which the amount of the first-mentioned aluminosilicate present is in the range 10 to 40 per cent by weight of the dentifrice composition.

36. A dentifrice composition as claimed in any one of Claims 19 to 32 in which the amount of the first-mentioned aluminosilicate present is in the range 25 to 35 per cent by weight of the dentifrice composition.

40 37. A dentifrice composition as claimed in any one of Claims 19 to 32, 35 and 36 in which the cleaning booster is present in an amount of up to 15 per cent by weight of the dentifrice composition,

38. A dentifrice composition as claimed in any one of Claims 19 to 32, 35 and 36 in which the cleaning booster is present in an amount in the range 1 to 10 per cent by weight.

5 39. A dentifrice composition as claimed in any one of the preceding claims having an FT_{100} Cleaning value of at least 50 per cent.

40. A dentifrice composition as claimed in any one of the preceding claims having an FT_{100} Cleaning value of at least 70 per cent.